

Institute of Physics Publishing

# Interfacial Nanostructures in Ceramics: A Multiscale Approach 2007

Journal of Physics: Conference Series Vol. 94

May 28 – June 1, 2007  
Strasbourg, France

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

ISBN: 978-1-60560-249-3

Some format issues inherent in the e-media version may also appear in this print version.

Copyright (2007) by the Institute of Physics Publishing.

All rights reserved.

For permission requests, please contact the Institute of Physics Publishing at the address below.

Institute of Physics Publishing  
Dirac House, Temple Back  
Bristol BS1 6BE UK

**Tel** +44 (0)117 929 7481  
**Fax** +44 (0)117 929 4318

Institute of Physics Publishing

Interfacial Nanostructures in Ceramics: A Multiscale Approach  
2007

## TABLE OF CONTENTS

<b>New Perspectives on Van Der Waals–London Interactions of Materials. from Planar Interfaces to Carbon Nanotubes .....</b>	<b>1</b>
<i>R F Rajter, R H French</i>	
<b>Phase Field Modelling of Interfaces from First Principles.....</b>	<b>12</b>
<i>G Pruessner, A P Sutton</i>	
<b>Self-consistent Inhomogeneous Dielectric Response Profiles from a Nonlocal Continuous Lifshitz Formulation of Van Der Waals Interactions.....</b>	<b>22</b>
<i>G Veble, R Podgornik</i>	
<b>Al-oxynitride Interfacial Layer Investigations for Pr<sub>x</sub>O<sub>y</sub> on SiC and Si.....</b>	<b>30</b>
<i>K Henkel, K Karavaev, M Torche, C Schwiertz, Y Burkov, D Schmeißer</i>	
<b>First Principles Investigation of Polarisation at Interfaces in Multilayered Strontium Titanate .....</b>	<b>35</b>
<i>N A Benedek, C Elsässer, M W Finnis</i>	
<b>Improvement of Dielectric Properties of BLT Thin Films Deposited by Magnetron Sputtering .....</b>	<b>46</b>
<i>M P Besland, C Borderon, P R J Barroy, S Le Tacon, M Richard-Plouet, D Averty, P Y Tessier, H W Gundel, L Brohan, M A Djouadi</i>	
<b>Scanning Electron Microscopy and Resistive Transition of In-situ Grown YBCO Films by Pulsed Laser Deposition .....</b>	<b>52</b>
<i>M Branescu, I Ward, J Huh, Y Matsushita, G Zeltzer</i>	
<b>Studies of Grain Orientations and Grain Boundaries in Polycrystalline SrTiO<sub>3</sub> .....</b>	<b>59</b>
<i>S-J Shih, K Dudeck, S-Y Choi, M Baeurer, M Hoffmann, D Cockayne</i>	
<b>Grain Size Influence on Admittance of Diamond Thin Films.....</b>	<b>71</b>
<i>M C Feliciangeli, M C Rossi, G Conte</i>	
<b>Dielectric Properties of Pure and Nb-doped SrTiO<sub>3</sub> Surfaces: a Reflection Electron Energy Loss Spectroscopy Study .....</b>	<b>82</b>
<i>V Fouquet-Parry, F Paumier, M J Guittet, M Gautier-Soyer</i>	
<b>Study of Grain Boundary Properties in Ag-clad Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>x</sub> Tapes by Multi-phase Electron Backscatter Diffraction Analysis.....</b>	<b>91</b>
<i>A Koblischka-Veneva, M R Koblischka</i>	
<b>Comparison Between PZT Thin Films Deposited on Stainless Steel and on Platinum/silicon Substrate.....</b>	<b>98</b>
<i>V Stancu, F Sava, M Lisca, L Pintilie, M Popescu</i>	
<b>Effect of Surface Orientation on Intrinsic Island Formation on SrTiO<sub>3</sub> Surfaces.....</b>	<b>106</b>
<i>B Rahmati, W Sigle, J Fleig, M Konuma, U Eigenthaler, Ch Koch, P A van Aken, J Maier, M Rühle</i>	

<b>Bi<sub>3.25</sub>La<sub>0.75</sub>Ti<sub>3</sub>O<sub>12</sub> Films on La<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub> Thin Films Prepared by Chemical Solution Deposition</b> .....	112
<i>C E Liu, M Richard-Plouet, D Albertini, M P Besland, L Brohan</i>	
<b>Changes in Macroscopic Behaviour Through Segregation in Niobium Doped Strontium Titanate</b> .....	117
<i>M Bäurer, L F Zagonel, N Barrett, M J Hoffmann</i>	
<b>Author Index</b>	